

polymerization coating is effective to enhance the adhesive strength between said silica and said epoxy resin,

and combining said coated silica with said epoxy resin to form an epoxy molding compound (EMC).

2. (Twice Amended) A method of enhancing adhesion between silica and epoxy resin by surface modifying silica by plasma polymerization coating, comprising the steps of:

1) charging said silica into a plasma polymerization reactor, followed by vacuuming to 1×10^{-3} torr;

2) introducing a monomer into said reactor;

3) rotating said reactor at from 1 to 50 rpm, with the conditions comprising a plasma power of 10 to 40 W, a gas pressure of 40 to 50 mtorr, and a treatment time of 20 to 40 seconds,

wherein said silica has an average diameter of 25-35 μm ;

said monomer is selected from the group consisting of 1,3-diaminopropane, allylamine, pyrrole, 1,2-epoxy-5-hexene, allylmercaptan, and allyl alcohol, and said plasma polymerization coating is effective to enhance the adhesive strength between said silica and said epoxy resin; and

4) combining said surface modified silica and said epoxy resin to form an epoxy molding compound (EMC).

5. (New) A method according to Claim 1, wherein said epoxy resin is a mixture comprising epoxy resin, hardener, and promoter.

6. (New) A method according to Claim 1, wherein said combining

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

comprises forming said coated silica and said epoxy into a homogeneous mixture.

7. (New) A method according to Claim 6, further comprising introducing said homogeneous mixture into a mold.

8. (New) A method according to Claim 7, wherein said mold is a silicon rubber mold.

9. (New) A method according to Claim 1, wherein said plasma polymerization coating is effective to enhance the flexural strength of said epoxy molding compound.

10. (New) A method according to Claim 2, wherein said epoxy resin is a mixture comprising epoxy resin, hardener, and promoter.

11. (New) A method according to Claim 2, wherein said combining comprises charging said coated silica into an epoxy resin, and forming said coated silica and said epoxy resin into a homogeneous mixture.

12. (New) A method according to Claim 11, further comprising introducing said homogeneous mixture into a mold.

13. (New) A method according to Claim 12, wherein said mold is a silicon rubber mold.

14. (New) A method according to Claim 2, wherein said plasma polymerization coating is effective to enhance the flexural strength of said epoxy molding compound.

*B¹¹
mold*

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com